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#PRP1786

***Star Trek: The Motion Picture* Tricorder Prop Kit Assembly Manual**



For the first time ever, **Roddenberry.com** is pleased to introduce the ***Star Trek: The Motion Picture* Tricorder** build it yourself prop kit! This tricorder is engineered for ease of assembly to make a most convincing non-functioning tricorder.

No electronics or electronic modification instructions are included with this kit.

PARTS INCLUDED IN KIT:

- 1 Upper Body - Top Wedge (resin cast)
- 1 Mid-Plate (resin cast)
- 1 Lower Body (resin cast in 2 halves)
- 1 each Left and Right Hand-grips (rubber castings)
- 1 Fold Down Door (resin cast) with brass axle
- 1 each Upper and Lower Chipholder Plates, and plate spacer (laser-cut acrylic)
- 8 Data Chips (laser-cut acrylic)
- 1 each Chip Slider, Slider Cross, and slider grip
- 2 complete Graphics Sheets (water-slide decals)
- Copper vinyl strips (2) and white vinyl detail strips (14)
- 14 each Colored Pins and Brass Eyelets
- 6 each long and short wood screws
- 4 @ 2-56 screws



TOOLS AND SUPPLIES NEEDED:

- Hobby knife (X-Acto or similar brand)
- Sandpaper (220-320 rough grit, 400-600 finishing grit)
- Hand drill, with 3/32" drill bit
- Flat file(s)
- Screwdriver
- Cyanoacrylate (CA) glue, and CA cure accelerator
- Acrylic solvent cement such as Weld-On 3 or similar
- Testors Clear Parts Cement
- Bondo plastic filler and/or automotive/hobby spot putty
- Masking tape (blue low-tack type recommended)
- Tweezers

PAINTS NEEDED [SPRAY PAINTS UNLESS NOTED]:

- Primer (sandable-type recommended)
- Krylon Stone Gray #1605
- Testors Clear Coat to spray on your decals
- Semi-gloss or gloss black (spray or brush-on)
- White (brush-on)
- Plastikote or other brand Bumper Paint (charcoal gray)





Step 1: Wash all resin parts with chlorine based cleaner such as Comet or Ajax to remove all resin mold residue. Sand off imperfections and all mold lines and sprues from the castings including the mold bridges from all the body grooves, and fill pinholes with bondo or putty on your parts including the fold-down door.



Step 2: Insert the brass axle through the holes in bottom of the fold-down door.



Step 3: Test fit the fold-down door into the lower body with the square hole in it. Due to some shrinkage in some resin castings, you may have to sand some of the lip on the door frame so as not to scrape off the final paint finish.

Note that you may put together the two lower body halves, the mid-plate, and the top body wedge with the supplied screws for later installation of electronics, or you may glue the parts together with CA if you're making a dummy tricorder -- but if you use glue, it will be difficult to break the parts apart without damage if you change your mind later.



Step 4: Assuming you'll be screwing it together, hold the two lower body halves together and drill all six holes with your 3/32" drill bit 3/4" deep.



Step 5: Test fit the 2 halves and use four long wood screws to temporarily hold them together



Step 6: Now lay the top plate into the top groove and press into place. Make sure the data chip slot is on the same side as the large square door hole. With the 3/32" drill bit, drill down through the 6 counter sink holes to a depth of 5/8" to 3/4 of an inch.

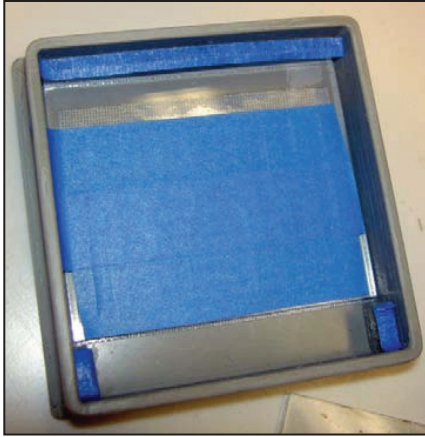
Step 7: Remove the 4 screws that hold the two lower body halves together for now. Prep the fold-down door and the inside of both the lower body halves by sanding them with 400 grit sandpaper, as you will need to primer and paint the inside of the back wall of the frame and the inside of the door with Krylon Stone Gray before you paint the outside of the other parts -- they will be visible when you open up the door for access to the tricorder's data chips.



Step 8: After sanding the door inside and out, prep the 3 laser cut parts by sanding them with 220 to 400 grit sandpaper. The laser cut parts with the 8 holes in it has a good side and a bad side, as one side of the slots is a little rough due to the parts that break out after the laser cut. Sand with 400 grit sandpaper and sand down into the slots to remove any roughness, or use a flat file in the slots, then glue the plate spacer on the opposite wall from the axle side with CA.

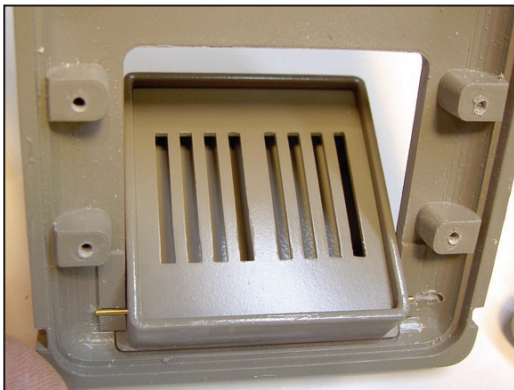


Step 9: The smaller of the two 8-slot plastic parts will stick onto the double-stick carpet tape in the door bottom against the spacer you glued in place -- the wider space on this part goes up against the spacer strip you just glued in, and is also glued in place. The tape is put there in an effort to help the data chips stay put when the tricorder is carried around and the door is opened.

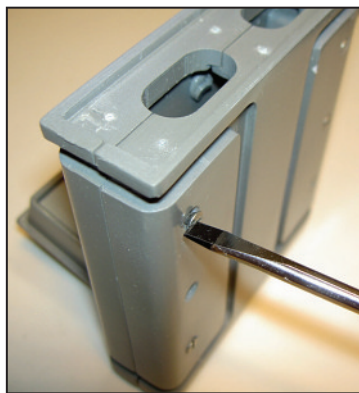


Step 10: With masking tape, mask the lower slot plate covering all the slots, and the top surfaces of the two axle protrusions and the spacer plate .

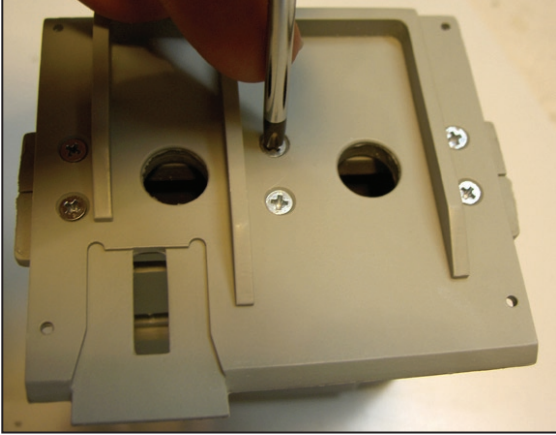
Prime and paint the inside door and the outside frame areas with Stone Gray. Also paint the inside of the back area of the handle, and the top surface of the upper chipholder plate. Let the paint dry completely, and remove your masking tape.



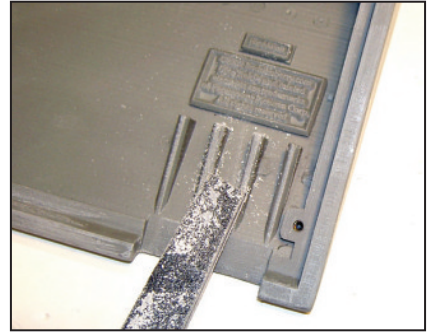
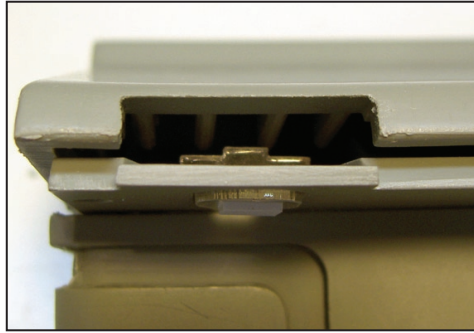
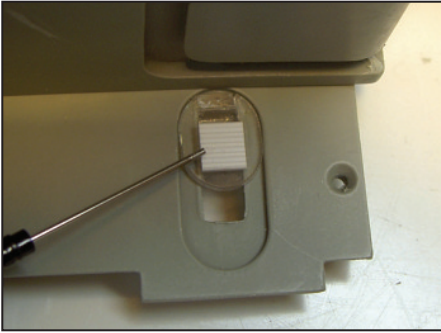
Step 11: Glue the top 8 slot chip-holder plate, which is placed paint side out on top of the spacer piece and on the back two resin axle areas.



Step 12: Put the brass axle through the holes in the fold-out door and slide it into place, and screw the 2 halves of the base together with the long wood screws. You can use some CA glue to help hold them together if you wish, keeping in mind that if you're going to install electronics later you might not be able to get glued parts apart without causing damage.



Step 13: The mid-plate screws down to the handle section with the 6 short screws, which should already be pre-drilled earlier in the process.



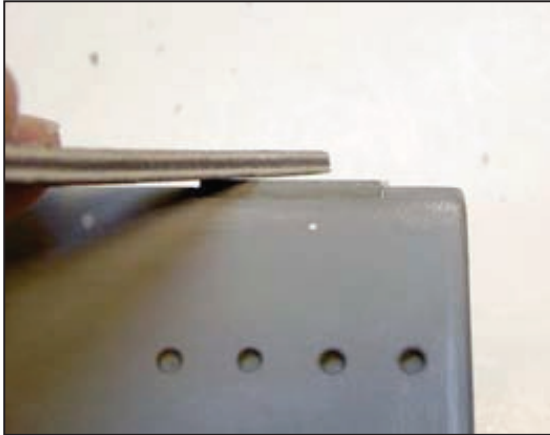
Step 14: Sand and assemble the data chip slider by gluing with Weld-On 3 the cross shaped piece (the long side) to the oval thumb-slider through the hole on the mid-plate with the cross piece towards the inside, making sure it will still slide easily -- you should also sand smooth the areas on the mid-plate and the top wedge where the slider and data chip will be in contact for smooth operation.

Step 15: Now you can decide if you want to add electronics or build a static prop. If you are planning to add electronics now or later, drill all the holes in the angle top for your lights, then screw the angle top onto the mid-plate using the four 2-56 screws provided.

If you are building just a static prop, install the screws and fill the seams and the 4 screw holes with bondo, sand and paint.

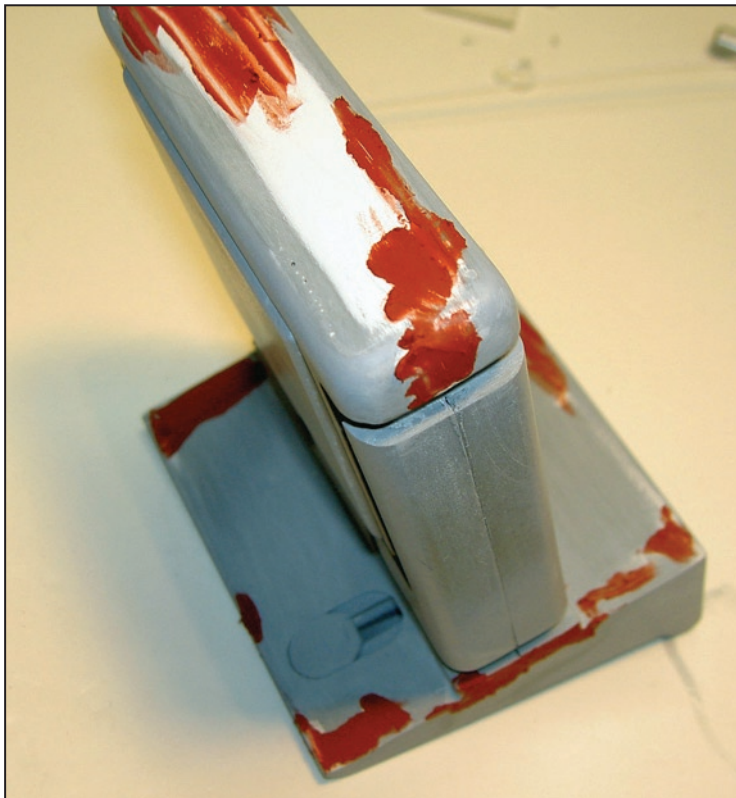


Step 16: Bondo or putty the seams down the visible sides of the lower body that the rubber grips won't be covering, and the bottom, as well as the seam at the middle sides of the top wedge/mid-plate, and sand with 400-grit paper until smooth.



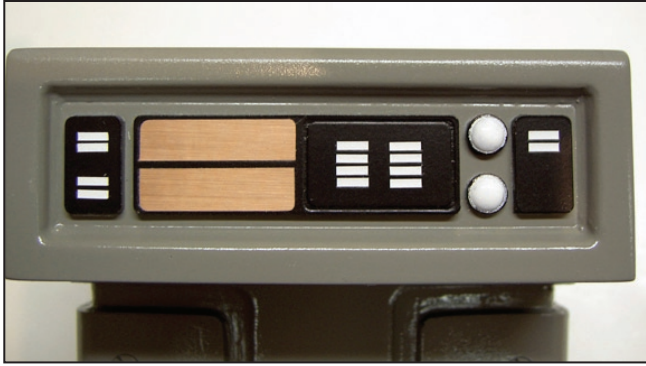
Step 17: File or sand the chip slot lip until it is even with the tricorder's edge if needed.

These instructions assume you will be putting all electronics in the top wedge space, so you may omit this step for the lower body at this time if you think you will be putting any circuitry down there and you have to get the halves apart, otherwise filling in the lower body seam will make for a much nicer looking tricorder.



Step 18: Make sure to close the chip door to ensure no additional paint gets inside, and spray primer all of your tricorder. Check the surface for imperfections, putty and sand any such areas, and primer again until you are satisfied with your finish. Paint with Krylon Stone Gray, wet sand if desired with 600 grit, then paint a final coat of gray and set aside to cure several hours or overnight. A gloss finish is best for application of water-slide decals.





Step 19: Mask and spray paint, or hand paint the front detail plates with semi gloss or gloss black. Paint the two round domes white.

Add the white detail tape provided into the recessed areas; there are 14 places for tape to be placed.

Place the 2 copper foil strips into their recessed areas.

Hand paint the inside of the data chip slot with semi gloss or gloss black paint -- if you didn't glue the upper parts together or bondo the seams, you can unscrew and remove the top wedge to make this step a little easier.



Step 20: Trim the water slide decal (2 provided in case of accident), and test place where they need to be; try to get the lower left rectangle centered around the four holes, and the "1L, 2L.../1R, 2R..." lined up with those corresponding holes. Decals are best applied on gloss surfaces, so make sure your finish is good before starting. Using tweezers, dip the decal in a cup of water (do not soak the decal!), and lay the decal on your work surface for 60 seconds, then slide the decal off the backing paper into position on the tricorder. Gently blot out excess water and allow to dry a couple of hours.

You may use a decal setting solution such as Microscale brand MicroSet if you have it, and put on the part as per directions. Set them into place as per photo for placement, and let dry completely for a couple of hours. Mist on clear spray that is only made for decals -- Testors Clear Coat is widely available in hobby stores -- other brands of clear sprays may irreparably harm your decals.



Step 21: Place the arrowhead decal on the center of the chip door and repeat decal set process.

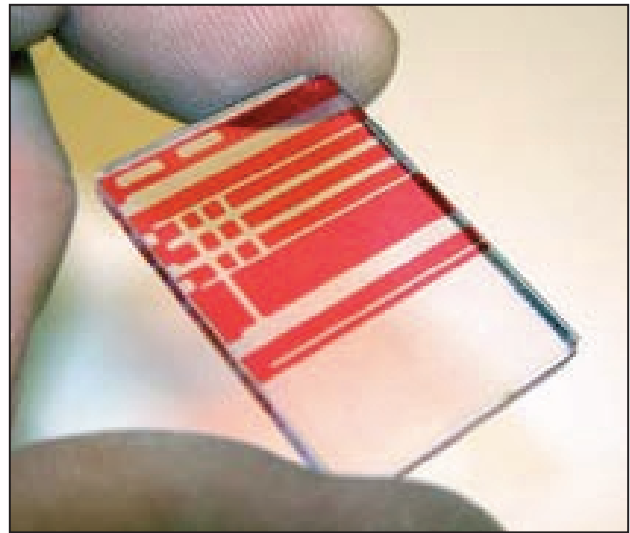
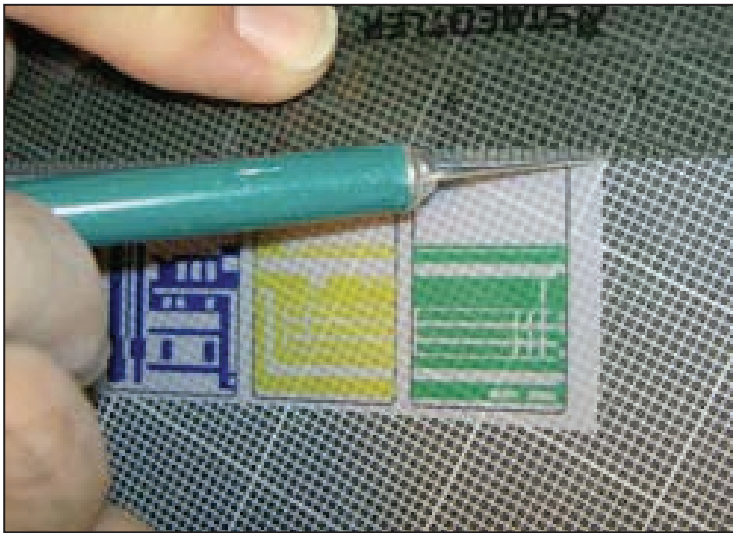


Step 22: Place the brass eyelets into the holes with a drop of Testors Clear Parts Cement, and after they dry, glue all the colored pins in the eyelets with Clear Parts Cement; these effectively simulate the different lights on the tricorder. As there is no available reference on what colors they actually were, the colors you get with this kit are completely random and they may be placed at any location; or if desired, you may brush paint the pin heads any colors you want. You might need to trim the pins for them to fit, or drill small holes in the middle of each eyelet hole.



Step 23: The rubber hand-grips may need to have some flash cut off around the edges -- cut it off with scissors or a good sharp hobby knife blade. Test fit how the handles fit into place -- note that they may stay in place without glue. Insert the handles into place, and if they need it, secure with a couple drops of CA; you won't need much -- and you will need to scrape some of the paint from the grooves so that the CA will bond with the handles. Be careful with the amount of glue used because you do not want to mar the finish with glue squishing out of the sides.

If desired, you could paint the hand grips with charcoal gray flexible bumper paint available at auto parts stores before installing the grips.



Step 24: Cut the clear color decals to fit on the eight data chips and trim around them after placing on the clear chips, then place all 8 chips into the chip slots of the open door.



Congratulations, you've successfully assembled a Roddenberry.com *Star Trek The: Motion Picture* Tricorder!

IMPORTANT NOTES:

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